

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica St. Louis  
13715 Rider Trail North  
Earth City, MO 63045  
Tel: (314)298-8566

TestAmerica Job ID: 160-5405-2

Client Project/Site: Glen Isle, Radiological Analyses

For:

Posillico Dev Company at Harbor Isle LLC  
1750 New Highway  
Farmingdale, New York 11735

Attn: Ellis Koch

*Rhonda Ridenhower*

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Authorized for release by:  
3/31/2014 3:25:51 PM

Rhonda Ridenhower, Manager of Project Management  
(314)298-8566  
[rhonda.ridenhower@testamericainc.com](mailto:rhonda.ridenhower@testamericainc.com)

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[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Case Narrative

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

**Job ID: 160-5405-2**

**Laboratory: TestAmerica St. Louis**

**Narrative**

### CASE NARRATIVE

**Client: Posillico Dev Company at Harbor Isle LLC**

**Project: Glen Isle, Radiological Analyses**

**Report Number: 160-5405-2**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica St. Louis attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client."

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

#### RECEIPT

The samples were received on 02/04/2014; the samples arrived in good condition, properly preserved. The temperatures of the 2 coolers at receipt time were 20.2° C and 20.2° C. This analysis was requested by the client and not listed on the COC.

#### RADIUM-226 (GFPC)

Samples LT-R-002-GW (160-5405-4) and LT-R-003-GW (160-5405-7) were analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were originally analyzed without ingrowth and counted on 21/11/14 and 2/12/14. The original planchet was recounted on 3/30/14 for the Radium 226 analysis with 21 days of ingrowth.

All quality control parameters were within the acceptance limits.

Call 315

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes ☐ No ☐


## Chain of Custody Record

TAL-4124 (1007)

Client <b>Ellis Koch-RXR-Glenisle Parkersville</b>		Project Manager <b>Derek Frisbeck</b>		Date <b>11/30/14</b>	Chain of Custody Number <b>270345</b>
Address <b>625 RXR Plaza</b>		Telephone Number (Area Code)/Fax Number <b>603-589-6353</b>		Lab Number	Page <b>2</b> of <b>2</b>
City <b>Unionville</b>	State <b>NY</b>	Zip Code <b>11556</b>	Site Contact <b>Armando R. Canale</b>		
Project Name and Location (State) <b>Glenisle Waterfront Redevelopment</b>		Carrier/Waybill Number			
Contract/Purchase Order/Quote No.					

Special Instructions/  
Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Succ	Meta	Pestic	Glum	Total A	Diss. A	Arsen	Lead	VOC
LT-C-032-0-2	11/30/14	1450				X	2						X	X	X						
LT-C-032-2-4	11/30/14	1455				X	2						X	X	X						
LT-C-032-8-10	11/30/14	1500				X	2						X	X	X						
DUG 012	11/30/14	Xxxx				X	2						X	X	X						
LT-R-001-0-5	11/31/14	1920				X	2									X			X	X	
LT-R-001-5-10	11/31/14	1025				X	2									X			X	X	
LT-R-001-GW	11/31/14	0915	X				3		63				X			X	X	X	X	X	X
LT-R-002-0-5	11/31/14																				
LT-R-002-5-10	11/31/14																				
LT-R-002-GW	11/31/14	1155	X				3		63				X			X	X	X	X	X	X
Trip Blank-1	11/8/14	Xxxx	X				2														X
FR014	11/31/14	1105	X				3		62				X			X	X	X	X	X	X



480-54118 Chain of Custody



480-54118 Chain of Custody

5405

### Sample Disposal

Possible Hazard Identification  
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Turn Around Time Required  
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other \_\_\_\_\_

1. Relinquished By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

2. Relinquished By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

3. Relinquished By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Comments \_\_\_\_\_

(A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)

1. Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

2. Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

3. Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Temp 3.6 4, 2 3.8 3.2 #1

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## Chain of Custody Record

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes ☐ No ☐

TAL-4124 (1007)

Client <b>Ellis Koch-RxR- Glenisde Partners</b>		Project Manager <b>Derek Ersbak</b>		Data <b>11/31/14</b>		Chain of Custody Number <b>270349</b>	
Address <b>625 RxR Plaza</b>		Telephone Number (Area Code)/Fax Number <b>603-559-6553</b>		Lab Number		Page <b>2</b> of <b>2</b>	
City <b>Unionville</b>	State <b>NH</b>	Zip Code <b>03086</b>	Site Contact <b>Arande Rancicello</b>	Analysis (Attach list if needed)			
Project Name and Location (State) <b>Glenisde Waterfront Redevelopment</b>			Lab Contact				
Contract/Purchase Order/Quote No.			Carrier/Waybill Number				

Special Instructions/  
Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Sva	Test	Lea	Guar	Total	Dis. M	VOC
FBO15		11/31/14	1120		X											X	X	X		
LT-R-003-GW		11/31/14	1245		X			3		6	3			X	X	X	X	X		X
<div>AP</div>																				

Possible Hazard Identification  
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Return To Client ☐ Disposal By Lab ☐ Archive For \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify)

Turn Around Time Required	1. Relinquished By	2. Relinquished By	3. Relinquished By
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input type="checkbox"/> Other	Date: 11/31/14 Time: 1300 Signature: [Signature]	Date: 11/31/14 Time: 1430 Signature: [Signature]	Date: 12/4/14 Time: 0945 Signature: [Signature]

Comments: TA BUSTALO 2/3/14 1700  
 Temp 3.6 4.2 3.8 3.2 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

## Login Sample Receipt Checklist

Client: Posillico Dev Company at Harbor Isle LLC

Job Number: 160-5405-2

Login Number: 5405

List Source: TestAmerica St. Louis

List Number: 1

Creator: Clarke, Jill C

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Definitions/Glossary

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

### Qualifiers

#### Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Method Summary

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	TAL SL

### Protocol References:

EPA = US Environmental Protection Agency

### Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

## Sample Summary

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-5405-4	LT-R-002-GW	Water	01/31/14 11:55	02/04/14 09:45
160-5405-7	LT-R-003-GW	Water	01/31/14 12:45	02/04/14 09:45

## Client Sample Results

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

**Client Sample ID: LT-R-002-GW**

**Date Collected: 01/31/14 11:55**

**Date Received: 02/04/14 09:45**

**Lab Sample ID: 160-5405-4**

**Matrix: Water**

**Method: 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.27		0.221	0.249	1.00	0.152	pCi/L	03/26/14 14:12	03/30/14 20:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	69.6		40 - 110					03/26/14 14:12	03/30/14 20:48	1

**Client Sample ID: LT-R-003-GW**

**Date Collected: 01/31/14 12:45**

**Date Received: 02/04/14 09:45**

**Lab Sample ID: 160-5405-7**

**Matrix: Water**

**Method: 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.852		0.117	0.140	1.00	0.0628	pCi/L	03/26/14 14:12	03/30/14 20:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.0		40 - 110					03/26/14 14:12	03/30/14 20:48	1

# QC Sample Results

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

## Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-112739/1-A

Matrix: Water

Analysis Batch: 113379

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 112739

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.05449	U	0.0425	0.0428	1.00	0.0633	pCi/L	03/26/14 14:12	03/30/14 20:48	1
Carrier	MB %Yield	MB Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.0		40 - 110					03/26/14 14:12	03/30/14 20:48	1

Lab Sample ID: LCS 160-112739/2-A

Matrix: Water

Analysis Batch: 113379

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 112739

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Radium-226			11.2	12.92		1.24	1.00	0.0707	pCi/L	115	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits								
Ba Carrier	91.4		40 - 110								

TestAmerica St. Louis

## QC Association Summary

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

### Rad

#### Prep Batch: 112739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-5405-4	LT-R-002-GW	Total/NA	Water	PrecSep-21	
160-5405-7	LT-R-003-GW	Total/NA	Water	PrecSep-21	
LCS 160-112739/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-112739/1-A	Method Blank	Total/NA	Water	PrecSep-21	

## Tracer/Carrier Summary

Client: Posillico Dev Company at Harbor Isle LLC  
Project/Site: Glen Isle, Radiological Analyses

TestAmerica Job ID: 160-5405-2

**Method: 903.0 - Radium-226 (GFPC)**

**Matrix: Water**

**Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	
160-5405-4	LT-R-002-GW	69.6	
160-5405-7	LT-R-003-GW	87.0	
LCS 160-112739/2-A	Lab Control Sample	91.4	
MB 160-112739/1-A	Method Blank	92.0	
<b>Tracer/Carrier Legend</b>			
Ba = Ba Carrier			